

CLAIMS

- 1 - Process for the desulphurization of a mixture of hydrocarbons
5 comprising sulphur compounds, comprising a stage of oxidation by means of an oxidizing agent, in order to oxidize the sulphur compounds, followed by a stage of removal of the oxidized sulphur compounds by adsorption on an adsorbent solid, characterized in that the adsorbent solid comprises at least 60% by weight of amorphous silica/alumina.
- 10 2 - Process according to Claim 1, characterized in that the mixture of hydrocarbons before oxidation comprises aromatic hydrocarbons in an amount of less than or equal to 80% by weight.
- 15 3 - Process according to any one of the preceding claims, characterized in that the sulphur content of the mixture of hydrocarbons before adsorption is less than or equal to 200 ppm
- 4 - Process according to any one of the preceding claims, characterized in that the oxidizing agent comprises hydrogen peroxide.
- 20 5 - Process according to any one of the preceding claims, characterized in that the alumina content of the silica/alumina is less than or equal to 50% by weight (with respect to the total weight of the dry adsorbent solid).
- 25 6 - Process according to any one of the preceding claims, characterized in that the adsorbent solid is devoid of any solid of crystalline structure.
- 7 - Process according to any one of Claims 1 to 5, characterized in that the adsorbent solid comprises at least one solid of crystalline structure in an amount of less than or equal to 40% by weight (with respect to the total weight of the dry adsorbent solid).
- 8 - Process according to the preceding claim, characterized in that the solid of crystalline structure is a zeolite X or Y.

9 - Process according to any one of the preceding claims, characterized in that the adsorbent solid exhibits a specific surface of greater than or equal to 400 m²/g and less than or equal to 1000 m²/g.

5 10 - Process according to any one of the preceding claims, characterized in that the adsorbent solid comprises mesopores.